
LEGISLATION AND POLICY

Offsets in Defense Trade Eleventh Report to Congress, January 2007

By

U.S. Department of Commerce's Bureau of Industry and
Security Office of Strategic Industries and Economic Security

[The following are extracts of the eleventh annual report released January 2007. Some of the footnotes and tables have been omitted from this excerpt; however, the footnotes and table numbers remain the same as in the original document. The complete report is available at the following web site: <http://www.bis.doc.gov/DefenseIndustrialBasePrograms/OSIES/offsets/FinalOffsetsElevenReport.pdf>.

Introduction

This is the eleventh annual report on the impact of offsets in defense trade prepared by the U.S. Department of Commerce's Bureau of Industry and Security (BIS), Office of Strategic Industries and Economic Security pursuant to Section 309 of the *Defense Production Act of 1950*,¹ as amended (DPA). The report analyzes the impact of offsets on the defense preparedness, industrial competitiveness, employment, and trade of the United States.

Offsets in defense trade encompass a range of industrial compensation arrangements required by a foreign government as a condition of purchase of U.S. defense articles and services. This mandatory compensation can take many forms; it can be directly related to the purchased defense system and related services, or it can involve activities or goods unrelated to the defense system. The compensation can be further classified as a subcontract, purchase, co-production, technology transfer, licensed production, credit assistance, overseas investment, or training.

Some have raised concerns about the effects of offsets on the U.S. industrial base, since most offset arrangements involve purchasing, subcontracting, and co-production opportunities for U.S. competitors, as well as transferring technology and know-how. The official U.S. government policy on offsets in defense trade states that the government considers offsets to be "economically inefficient and trade distorting," and forbids government agencies from helping U.S. contractors to fulfill their offset obligations.² U.S. prime contractors generally see offsets as a reality of the marketplace for companies competing for international defense sales. Several U.S. prime contractors have informed BIS that offsets are usually necessary in order to make a defense sale.

In order to assess the impact of offsets in defense trade, BIS obtained data from U.S. defense firms involved in defense exports and offsets. These firms report their offset activities to BIS annually.³ This report covers offset agreements entered into and the offset transactions carried out to fulfill these offset obligations from 1993 through 2005.

1. Codified at 50 U.S.C. pp. § 2099 (2000).

2. *Defense Production Act Amendments of 1992* (Publ L. 102-558, Title 1, Part C, § 123).

3. Pursuant to 15 CFR Part 701 (1944).

Statutes and Regulations

In 1984, the Congress enacted amendments to the *Defense Production Act* (DPA), which included the addition of Section 309 addressing offsets in defense trade.⁸ Section 309 requires the President to submit an annual report on the impact of offsets on the U.S. defense industrial base to the Congress's then-Committee on Banking, Finance, and Urban Affairs of the House of Representatives⁹ and the Committee on Banking, Housing, and Urban Affairs of the Senate. Section 309 authorized the Secretary of Commerce to develop and administer the regulations necessary to collect offset data from U.S. defense exporters. The Secretary of Commerce delegated this authority to the Bureau of Industry and Security (BIS). BIS published its first offset regulations in 1994.¹¹

Every year, U.S. companies report offset agreement and transaction data for the previous calendar year to BIS. The 1992 amendments to Section 309 of the DPA reduced the offset agreement reporting threshold from \$50 million to \$5 million for U.S. firms entering into foreign defense sales contracts subject to offset agreements. Firms are also required to report all offset transactions for which they receive offset credits of \$250,000 or more.

United States Government Policy

The U.S. government policy on offsets in defense trade was developed by an interagency offset team. On April 16, 1990, the President announced a policy on offsets in military exports.¹² In 1992, Congress passed the following provision, which closely reflects the policy announced by the President:¹³

- (a) In General. Recognizing that certain offsets for military exports are economically inefficient and market distorting, and mindful of the need to minimize the adverse effects of offsets in military exports while ensuring that the ability of United States firms to compete for military export sales is not undermined, it is the policy of the Congress that:
 - (1) No agency of the United States government shall encourage, enter directly into, or commit United States firms to any offset arrangement in connection with the sale of defense goods or services to foreign governments
 - (2) United States government funds shall not be used to finance offsets in security assistance transactions, except in accordance with policies and procedures that were in existence on March 1, 1992
 - (3) Nothing in this section shall prevent agencies of the United States government from fulfilling obligations incurred through international agreements entered into before March 1, 1992
 - (4) The decision whether to engage in offsets, and the responsibility for negotiating and implementing offset arrangements, reside with the companies involved

8. See Pub. L. 98-265, April 17, 1984, 98 Stat. 149.

9. Section 309 of the DPA was amended in 2001 to reflect the change in the name of the House committee to the "Committee on Financial Services of the House of Representatives." See 50 U.S.C. app. § 2099(a)(1).

11. See 59 Fed. Reg. 61796, Dec. 2, 1994, codified at 15 C.F.R. § 701.

12. See April 16, 1990 statement by Press Secretary Fitzwater on offsets in military exports.

13. Congress incorporated this policy statement into law with the *Defense Production Act Amendments of 1992* (Pub. L. 102558, Title 1, Part C. § 123, 106 Stat. 4198).

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- (b) Presidential Approval of Exceptions. It is the policy of the Congress that the President may approve an exception to the policy stated in subsection (a) after receiving the recommendation of the National Security Council.
 - (c) Consultation. It is the policy of the Congress that the President shall designate the Secretary of Defense to lead, in coordination with the Secretary of State, an interagency team to consult with foreign nations on limiting the adverse effects of offsets in defense procurement. The President shall transmit an annual report on the results of these consultations to the Congress as part of the report required under section 309(a) of the DPA.

Provisions in the *Defense Offsets Disclosure Act of 1999*¹⁴ supplemented the offset policy:

- (1) A fair business environment is necessary to advance international trade, economic stability, and development worldwide; this is beneficial for American workers and businesses, and is in the United States' national interest.
- (2) In some cases, mandated offset requirements can cause economic distortions in international defense trade and undermine fairness and competitiveness, and may cause particular harm to small- and medium-sized businesses.
- (3) The use of offsets may lead to increasing dependence on foreign suppliers for the production of United States weapons systems.
- (4) The offset demands required by some purchasing countries, including some close allies of the United States, equal or exceed the value of the base contract they are intended to offset, mitigating much of the potential economic benefit of the exports.
- (5) Offset demands often unduly distort the prices of defense contracts.
- (6) In some cases, United States contractors are required to provide indirect offsets which can negatively impact non-defense industrial sectors.
- (7) Unilateral efforts by the United States to prohibit offsets may be impractical in the current era of globalization and would severely hinder the competitiveness of the United States defense industry in the global market.

The *Defense Offsets Disclosure Act of 1999* continues with the following declaration of policy:

It is the policy of the United States to monitor the use of offsets in international defense trade, to promote fairness in such trade, and to ensure that foreign participation in the production of United States weapons systems does not harm the economy of the United States.

Offsets Terminology

Several basic terms are used in discussions of offsets in defense trade.

- Offsets. Compensation practices required as a condition of purchase in either government-to-government or commercial sales of "defense articles" and/or "defense services" as defined by the *Arms Export Control Act* (AECA) (22 U.S.C. § 2751, et. seq.) and the *International Traffic in Arms Regulations* (ITAR) (22 C.F.R. §§ 120-130).

14. See Pub. L. No. 106-113 Stat. 1536, 1510A-500 to 1501A-505 (1999) (enacting into law Subtitle D of title XII of Division B of H.R. 3427 (113 Stat. 1501A-500) as introduced on Nov. 17, 1999) (found at 50 U.S.C. App. 2099. Note).

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- Direct Offsets. Contractual arrangements that involve defense articles and services referenced in the sales agreement for military exports. These transactions are directly related to the defense items or services exported by the defense firm and are usually in the form of co-production, subcontracting, technology transfer, training, production, licensed production, or financing activities.
 - Indirect Offsets. Contractual arrangements that involve defense goods and services unrelated to the defense items or services export referenced in the sales agreement. The kinds of offsets that are considered “indirect” include purchases, investment, training, financing activities, marketing/exporting assistance, and technology transfer.

General Overview

Table 2-1 provides a summary of all offset agreement and transaction activity for the thirteen-year period from 1993 through 2005. In 2005, the total value of offset agreements was \$1.5 billion. These agreements were made in conjunction with U.S. defense system exports totaling \$2.3 billion in 2005. Eight prime contractors reported that they entered into 25 offset agreements with 18 countries that year. The average offset percentage (offset value ÷ value of exported system) for 2005 was 64.8 percent, down from 87.9 percent in 2004, continuing the downward slope from the high of 124.9 percent recorded in 2003. The average offset agreement for the thirteen-year period was worth 71.2 percent of the value of the defense systems exported. The upward trend in offset requirements is also evident in Table 2-1. For the time period of 1993-1998, offset agreements totaled 54.7 percent of the value of the defense systems exported; for the time period of 1999-2005, that percentage had grown to 86.6 percent.

The recent decline in multipliers, witnessed in recent years, seems to have halted as multipliers rose for the first time in six years. The average multiplier in 2005 was 1.152, still below the average of 1.181 for the thirteen-year period. The highest multiplier, 1.363, came in 1999. Multipliers are granted on a decreasing level of transactions over time. A declining multiplier indicates that countries demanding offsets have granted lower credit values associated with offset agreements. Multipliers are used to target offset obligations toward a desired type of fulfillment.

Types of Offset Transactions

Table 2-2 presents offset transaction data by offset type (direct, indirect, or unspecified) and the percent distribution for each year from 1993 to 2005. Table 2-2 also shows the total actual and credit values of the transactions for each year.

The actual value of offset transactions completed during 2005 was \$4.7 billion, second only to 2004 in the 1993-2005 period. This is due to the high level of export sales and related offset agreements since 2000. Transactions lag a few years behind the offset agreements that they fulfill.

In 2005, the percentage of offset transaction value attributed to indirect offset transactions rose to 61.8 percent after declining to 46.6 percent in 2004, the second lowest level in the period. Direct transactions correspondingly decreased from 53.4 percent of all offset transactions completed in 2004 to 38.2 percent in 2005. 2004 recorded the second highest percentage for transactions classified as “direct;” 1998 had the highest percentage with 63.6 percent of offset transactions being direct. Percentages recorded in 2005 align more closely with those recorded from 1999-2003 than those recorded in 2004. For the thirteen-year period of this report, 39.8 percent of offset transactions by value were direct (down from 40.4 percent for 1993-2004), and 59.5 percent were indirect (up from 58.9 percent in 1993-2004).

Table 2-1. General Summary of Offset Activity, 1993-2005
(\$ Millions)

| Offset Agreements | | | | | | |
|--|-------------------|-------------------|-------------------|-------------------|--------------|-----------|
| Year | Export Value | Offset Value | Percentage Offset | Companies | Agreements | Countries |
| 1993 | \$13,935.0 | \$4,784.4 | 34.3% | 17 | 28 | 16 |
| 1994 | \$4,792.4 | \$2,048.7 | 42.7% | 18 | 49 | 20 |
| 1995 | \$7,529.9 | \$6,102.6 | 81.0% | 20 | 47 | 18 |
| 1996 | \$3,119.7 | \$2,431.6 | 77.9% | 16 | 53 | 19 |
| 1997 | \$5,925.5 | \$3,825.5 | 64.6% | 15 | 60 | 20 |
| 1998 | \$3,029.2 | \$1,768.2 | 58.4% | 12 | 41 | 17 |
| 1999 | \$5,656.6 | \$3,456.9 | 61.1% | 10 | 45 | 11 |
| 2000 | \$6,576.2 | \$5,704.8 | 86.7% | 10 | 43 | 16 |
| 2001 | \$7,017.3 | \$5,460.9 | 77.8% | 11 | 34 | 13 |
| 2002 | \$7,406.2 | \$6,094.8 | 82.3% | 12 | 41 | 17 |
| 2003 | \$7,293.1 | \$9,110.4 | 124.9% | 11 | 32 | 13 |
| 2004 | \$4,927.5 | \$4,329.7 | 87.9% | 14 | 40 | 18 |
| 2005 | \$2,259.9 | \$1,464.1 | 64.8% | 8 | 25 | 18 |
| Total | \$79,468.5 | \$56,582.7 | 71.2% | 42 | 538 | 41 |
| Offset Transactions | | | | | | |
| Year | Actual Value | Credit Value | Multiplier* | Offset Fulfillers | Transactions | Countries |
| 1993 | \$1,897.9 | \$2,213.6 | 1.166 | 43 | 444 | 27 |
| 1994 | \$1,934.9 | \$2,206.1 | 1.140 | 38 | 566 | 26 |
| 1995 | \$2,890.5 | \$3,592.6 | 1.243 | 57 | 11 | 26 |
| 1996 | \$2,875.8 | \$3,098.0 | 1.077 | 54 | 634 | 26 |
| 1997 | \$2,720.6 | \$3,272.3 | 1.203 | 51 | 578 | 26 |
| 1998 | \$2,312.2 | \$2,623.2 | 1.135 | 50 | 582 | 29 |
| 1999 | \$2,059.7 | \$2,808.3 | 1.363 | 41 | 513 | 25 |
| 2000 | \$2,208.2 | \$2,846.4 | 1.289 | 40 | 627 | 24 |
| 2001 | \$2,555.8 | \$3,274.4 | 1.281 | 53 | 617 | 25 |
| 2002 | \$2,616.0 | \$3,284.5 | 1.256 | 50 | 729 | 26 |
| 2003 | \$3,565.5 | \$4,010.7 | 1.125 | 56 | 689 | 31 |
| 2004 | \$4,933.1 | \$5,364.3 | 1.087 | 62 | 706 | 33 |
| 2005 | \$4,709.6 | \$5,426.6 | 1.152 | 61 | 611 | 30 |
| Total | \$37,279.7 | \$44,021.1 | 1.181 | 298 | 8,007 | 45 |
| <p>Source: BIS Offsets Database.</p> <p>Note: Due to rounding, totals may not add up exactly.</p> <p>*Multipliers are used only in a small percentage of the total number of transactions.</p> | | | | | | |

Table 2-2. Offset Transactions by Type, 1993-2005
(\$ Millions)

| Actual Value | | | | | Percent Distribution | | |
|--------------|-------------------|-------------------|-------------------|-----------------------------------|----------------------|--------------|-----------------------------------|
| Year | Total | Direct | Indirect | Unspecified Direct or Indirect | Direct | Indirect | Unspecified Direct or Indirect |
| 1993 | \$1,897.9 | \$583.6 | \$1,250.5 | \$63.9 | 30.7% | 65.9% | 3.4% |
| 1994 | \$1,934.9 | \$599.8 | \$1,230.8 | \$104.3 | 31.0% | 63.6% | 5.4% |
| 1995 | \$2,890.5 | \$1,108.8 | \$1,756.8 | \$24.9 | 38.4% | 60.8% | 0.9% |
| 1996 | \$2,875.8 | \$1,248.8 | \$1,625.6 | \$1.4 | 43.4% | 56.5% | 0.0% |
| 1997 | \$2,720.6 | \$1,041.7 | \$1,657.5 | \$21.4 | 38.3% | 60.9% | 0.8% |
| 1998 | \$2,312.2 | \$1,469.7 | \$842.4 | \$0.1 | 63.6% | 36.4% | 0.0% |
| 1999 | \$2,059.7 | \$685.2 | \$1,363.1 | \$11.4 | 33.3% | 66.2% | 0.6% |
| 2000 | \$2,208.2 | \$785.6 | \$1,411.9 | \$10.6 | 35.6% | 63.9% | 0.5% |
| 2001 | \$2,555.8 | \$940.9 | \$1,614.9 | NR | 36.8% | 63.2% | NR |
| 2002 | \$2,616.0 | \$941.8 | \$1,673.0 | \$1.3 | 36.0% | 63.9% | 0.1% |
| 2003 | \$3,565.5 | \$1,113.0 | \$2,447.0 | \$5.6 | 31.2% | 68.6% | 0.2% |
| 2004 | \$4,933.1 | \$2,635.2 | \$2,297.4 | \$0.5 | 53.4% | 46.6% | 0.0% |
| 2005 | \$4,709.6 | \$1,797.5 | \$2,912.1 | NR | 38.2% | 61.8% | 0.0% |
| Total | \$37,277.0 | \$14,850.4 | \$22,180.0 | \$249.1 | 39.8% | 59.5% | 0.7% |

| Credit Value | | | | | Percent Distribution | | |
|--------------|-------------------|-------------------|-------------------|-----------------------------------|----------------------|--------------|-----------------------------------|
| Year | Total | Direct | Indirect | Unspecified Direct or Indirect | Direct | Indirect | Unspecified Direct or Indirect |
| 1993 | \$2,213.6 | \$684.3 | \$1,460.6 | \$68.7 | 30.9% | 66.0% | 3.1% |
| 1994 | \$2,206.1 | \$774.1 | \$1,323.2 | \$108.8 | 35.1% | 60.0% | 4.9% |
| 1995 | \$3,592.6 | \$1,302.6 | \$2,250.7 | \$39.3 | 36.3% | 62.6% | 1.1% |
| 1996 | \$3,098.0 | \$1,182.0 | \$1,880.0 | \$36.0 | 38.2% | 60.7% | 1.2% |
| 1997 | \$3,272.3 | \$1,183.5 | \$2,039.1 | \$49.7 | 36.2% | 62.3% | 1.5% |
| 1998 | \$2,623.2 | \$1,629.4 | \$991.3 | \$2.5 | 62.1% | 37.8% | 0.1% |
| 1999 | \$2,808.3 | \$1,119.4 | \$1,618.7 | \$70.3 | 39.9% | 57.6% | 2.5% |
| 2000 | \$2,846.4 | \$1,146.4 | \$1,689.5 | \$10.6 | 40.3% | 59.4% | 0.4% |
| 2001 | \$3,274.4 | \$1,292.3 | \$1,982.1 | NR | 39.5% | 60.5% | NR |
| 2002 | \$3,284.5 | \$1,111.2 | \$2,171.9 | \$1.3 | 33.8% | 66.1% | 0.0% |
| 2003 | \$4,010.7 | \$1,215.5 | \$2,783.2 | \$12.0 | 30.3% | 69.4% | 0.3% |
| 2004 | \$5,364.3 | \$2,764.3 | \$2,599.5 | \$0.5 | 51.5% | 48.5% | 0.0% |
| 2005 | \$5,426.6 | \$1,870.9 | \$3,555.7 | NR | 34.5% | 65.5% | 0.0% |
| Total | \$44,018.4 | \$17,174.9 | \$26,442.6 | \$403.5 | 39.0% | 60.1% | 0.9% |

| Multiplier* | | | | | Number of Transactions | | | |
|--------------|--------------|--------------|--------------|-----------------------------------|------------------------|--------------|--------------|-----------------------------------|
| Year | Total | Direct | Indirect | Unspecified Direct or Indirect | Total | Direct | Indirect | Unspecified Direct or Indirect |
| 1993 | 1.166 | 1.173 | 1.168 | 1.076 | 444 | 132 | 308 | 4 |
| 1994 | 1.140 | 1.291 | 1.075 | 1.043 | 566 | 157 | 404 | 5 |
| 1995 | 1.243 | 1.175 | 1.281 | 1.579 | 711 | 204 | 505 | 2 |
| 1996 | 1.077 | 0.947 | 1.156 | 25.714 | 634 | 228 | 404 | 2 |
| 1997 | 1.203 | 1.136 | 1.23 | 2.326 | 578 | 202 | 372 | 4 |
| 1998 | 1.135 | 1.109 | 1.177 | 19.538 | 582 | 241 | 340 | 1 |
| 1999 | 1.363 | 1.634 | 1.187 | 6.152 | 513 | 203 | 305 | 5 |
| 2000 | 1.289 | 1.459 | 1.197 | 1.000 | 627 | 216 | 409 | 2 |
| 2001 | 1.281 | 1.374 | 1.227 | NR | 617 | 224 | 393 | NR |
| 2002 | 1.256 | 1.18 | 1.298 | 1.000 | 729 | 194 | 534 | 1 |
| 2003 | 1.125 | 1.092 | 1.137 | 2.151 | 689 | 179 | 506 | 4 |
| 2004 | 1.087 | 1.049 | 1.131 | 1.000 | 706 | 375 | 330 | 1 |
| 2005 | 1.153 | 1.041 | 1.221 | 1.000 | 611 | 206 | 405 | NR |
| Total | 1.181 | 1.157 | 1.192 | 1.620 | 8,007 | 2,761 | 5,215 | 31 |

Source: BIS Offsets Database.
NR = None Reported
Note: Due to rounding, totals may not add up precisely.
*Multipliers are used only in a small percentage of the total number of transactions.

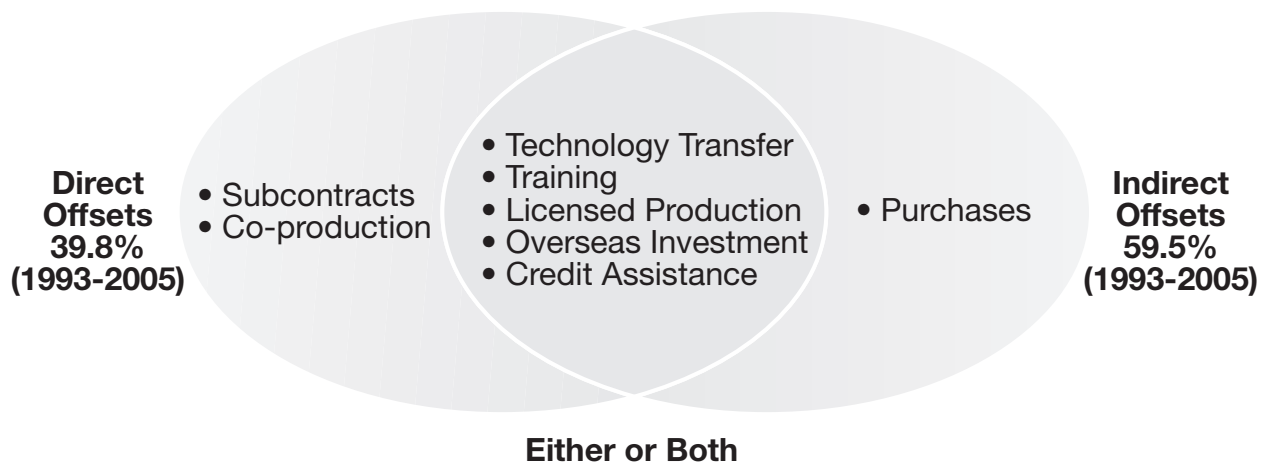
The multiplier, also shown in Table 2-2, is the percentage difference between the actual value of offset transactions and the credit value.¹⁵ This multiplier means that, for the database as a whole, the total credit value of the transactions is 18.1 percent more than the actual value; this is a slight decrease from 18.5 percent for 1993-2004. In 2005, the multiplier rose to 1.153, temporarily halting the steady drop witnessed since the 1999 level of 1.363. Whether this break is temporary or indicative of a larger trend remains to be seen. The great majority of offset transactions neither include multipliers nor have multipliers that provide a credit value less than the actual value of the transaction.

Offset Transaction Categories

In addition to classifying offset transactions by type (direct or indirect), offset transactions are identified by various categories, which more specifically describe the nature of the arrangement or exchange. These categories include:

- Purchases
- Subcontracts
- Technology Transfers
- Credit Assistance
- Training
- Overseas Investment
- Co-production
- Licensed Production
- Miscellaneous

The diagram below shows that each category is considered direct, indirect, or could be either one (e.g., Technology Transfer, Training).



15. The credit value is sometimes more than the actual value assigned to transactions; some foreign governments give greater credit as an incentive for certain kinds of offset transactions. This incentive, called a multiplier, varies by country and by the kind of transaction - usually indirect offset transactions (i.e., purchase, technology transfer, and investment) receive higher credit value than direct offset transactions.

Purchases result in overseas production of goods or services usually for export to the United States. Purchases are always classified as indirect offsets to distinguish them from subcontracts, because the purchases are of items unrelated to the exported defense system. The U.S. exporter may make the purchase, or they can also use brokering and marketing assistance services that result in purchases by a third party. For 1993-2005, purchases represented 37.9 percent of the actual value of all offset transactions, more than any other category. They made up 63.6 percent of the value of indirect offsets. Aerospace-related offset transactions made up over 57 percent of the value of purchases during 1993-2005.

Subcontracts result in overseas production of goods or services for use in the production or operation of a U.S. exported defense system subject to an offset agreement. Subcontracts are always classified as direct offsets. During 1993-2005, subcontracts made up over one-fifth of the actual value of all offset transactions, and over 57 percent of the value of all direct offsets. Over 75 percent of the value of subcontracts was aerospace-related.

Technology transfer includes research and development conducted abroad, exchange programs for personnel, data exchanges, integration of machinery and equipment into a recipient's production facility, technical assistance, education and training, manufacturing know-how, and licensing and patent sharing. Technology transfer is normally accomplished under a commercial arrangement between the U.S. prime contractor and a foreign company. A major subcontractor may also accomplish the technology transfer on behalf of the U.S. prime contractor. For 1993-2005, technology transfer totaled just under \$6.2 billion, up from \$4.7 billion for 1993-2004. During the reporting period, 41.6 percent of the value of technology transfers was classified as direct offsets and 56.3 percent was indirect offsets; the balance was unspecified. Technology transfers accounted for approximately 16.6 percent of the actual value of all offset transactions.

Co-production is overseas production based upon a government-to-government agreement that permits a foreign government or producer to acquire the technical information to manufacture all or part of a U.S.-origin defense system. Co-production is always classified as a direct offset. It includes government-to-government licensed production, but excludes licensed production based upon direct commercial arrangements by U.S. manufacturers. During 1993-2005, 77 percent of the value of co-production reported was aerospace-related.

Co-production accounted for 6.6 percent of the value of offset transactions for 1993- 2005, unchanged from 1993-2004. Past Co-production transactions have involved constructing major production facilities in foreign countries (primarily at the expense of the foreign government) for the assembly of entire defense systems, such as aircraft, missiles, or ground systems. Co-production arrangements of this kind generally impose a high cost on the foreign government, including up front construction and tooling costs and increased unit costs for limited production runs. Some countries negotiate with prime contractors for production or assembly contracts related to future sales to third countries of the defense systems or system components.

Credit assistance includes direct loans, brokered loans, loan guarantees, assistance in achieving favorable payment terms, credit extensions, and lower interest rates. Credit assistance transactions accounted for 4.0 percent of the actual value of all transactions for 1993-2005. Credit assistance is nearly always classified as an indirect offset transaction but can be either direct or indirect. Indirect transactions made up 99.5 percent of the actual value of credit assistance for the period.

Table 2-3: Offset Transactions by Category and Type, 1993-2005

| Transaction Category | Actual Values in \$ Millions | | | Percent by Column Total | | | | |
|----------------------|------------------------------|-------------------|-------------------|--------------------------------|---------------|---------------|---------------|--------------------------------|
| | Total | Direct | Indirect | Unspecified Direct or Indirect | Total | Direct | Indirect | Unspecified Direct or Indirect |
| Purchase | \$14,119.1 | | \$14,119.1 | | 37.9% | | 63.6% | |
| Subcontract | \$8,540.9 | \$8,540.9 | | | 22.9% | 57.5% | | |
| Technology Transfer | \$6,190.4 | \$2,573.5 | \$3,497.1 | \$132.2 | 16.6% | 17.3% | 15.8% | 53.9% |
| Miscellaneous | \$2,352.3 | \$377.1 | \$1,965.4 | \$9.8 | 6.3% | 2.5% | 8.9% | 4.0% |
| Coproduction | \$2,457.9 | \$2,457.9 | | | 6.6% | 16.6% | 0.0% | |
| Credit Assistance | \$1,489.7 | \$7.2 | \$1,482.5 | | 4.0% | 0.0% | 6.7% | |
| Overseas Investment | \$1,041.9 | \$304.6 | \$659.8 | \$77.5 | 2.8% | 2.1% | 3.0% | 31.6% |
| Training | \$824.9 | \$484.7 | \$338.3 | \$1.9 | 2.2% | 3.3% | 1.5% | 0.8% |
| Licensed Production | \$262.7 | \$104.4 | \$134.2 | \$24.0 | 0.7% | 0.7% | 0.6% | 9.8% |
| Total | \$37,279.7 | \$14,850.4 | \$22,196.4 | \$245.4 | 100.0% | 100.0% | 100.0% | 100.0% |
| Transaction Category | Credit Values in \$ Millions | | | Percent by Column Total | | | | |
| | Total | Direct | Indirect | Unspecified Direct or Indirect | Total | Direct | Indirect | Unspecified Direct or Indirect |
| Purchase | \$15,656.8 | | \$15,656.8 | | 35.6% | 0.0% | 59.2% | 0.0% |
| Subcontract | \$9,462.3 | \$9,462.3 | | | 21.5% | 55.1% | | |
| Technology Transfer | \$7,381.8 | \$2,861.0 | \$4,366.2 | \$154.6 | 16.8% | 16.7% | 16.5% | 38.7% |
| Miscellaneous | \$3,486.6 | \$897.9 | \$2,516.2 | \$72.4 | 7.9% | 5.2% | 9.5% | 18.1% |
| Coproduction | \$2,422.9 | \$2,422.9 | | | 5.5% | 14.1% | | |
| Credit Assistance | \$1,691.9 | \$72.7 | \$1,619.2 | | 3.8% | 0.4% | 6.1% | |
| Overseas Investment | \$2,105.4 | \$584.4 | \$1,392.8 | \$128.2 | 4.8% | 3.4% | 5.3% | 32.1% |
| Training | \$1,359.6 | \$752.3 | \$593.9 | \$13.4 | 3.1% | 4.4% | 2.2% | 3.4% |
| Licensed Production | \$453.9 | \$121.4 | \$301.2 | \$31.2 | 1.0% | 0.7% | 1.1% | 7.8% |
| Total | \$44,021.2 | \$17,174.9 | \$26,446.4 | \$399.8 | 35.6% | 0.0% | 59.2% | 0.0% |
| Transaction Category | Multiplier* | | | Number of Transactions | | | | |
| | Total | Direct | Indirect | Unspecified Direct or Indirect | Total | Direct | Indirect | Unspecified Direct or Indirect |
| Purchase | 1.109 | | 1.109 | | 3,933 | | 3,933 | |
| Subcontract | 1.108 | 1.108 | | | 1,763 | 1,763 | | |
| Technology Transfer | 1.192 | 1.112 | 1.249 | 1.169 | 919 | 385 | 520 | 14 |
| Miscellaneous | 1.482 | 2.381 | 1.280 | 7.385 | 522 | 104 | 413 | 5 |
| Coproduction | 0.986 | 0.986 | | | 316 | 316 | | |
| Credit Assistance | 1.136 | 10.091 | 1.092 | | 119 | 8 | 111 | |
| Overseas Investment | 2.021 | 1.919 | 2.111 | 1.655 | 132 | 27 | 100 | 5 |
| Training | 1.648 | 1.552 | 1.756 | 7.193 | 265 | 127 | 133 | 5 |
| Licensed Production | 1.728 | 1.162 | 2.244 | 1.300 | 38 | 27 | 9 | 2 |
| Average | 1.181 | 1.157 | 1.191 | 1.629 | 8,007 | 2,757 | 5,219 | 31 |

Source: BIS Offsets Database.

Note: Totals are rounded figures.

*Multipliers are used only in a small percentage of the total number of transactions.

Overseas investment includes capital invested to establish or expand a subsidiary or joint venture in the foreign country as well as investments in third-party facilities; the latter received the highest multipliers. Overseas investments accounted for just 2.8 percent of the actual value of all offset transactions during the period of 1993-2005; 63.3 percent of the value of overseas investment transactions was classified as indirect and 29.2 percent as direct.

Training transactions relate to the production, maintenance, or actual use of the exported defense systems or a component thereof. Training transactions, which can be either direct or indirect, may be required in areas such as computers, foreign language skills, engineering capabilities, or management. During the reporting period, direct offset transactions made up 58.8 percent of the value of training transactions; 41.0 percent was indirect. Training accounted for only 2.2 percent of the total value of offset transactions between 1993 and 2005.

Licensed production is overseas production of a U.S.-origin defense article. Licensed production differs from co-production in that it is based on commercial arrangements between a U.S. manufacturer and a foreign entity as opposed to a government-to-government agreement. In addition, licensed production virtually always involves a part or component for a defense system, rather than a complete defense system. These transactions can be either direct or indirect. Licensed production is the smallest among the offset categories, accounting for only 0.7 percent of the total value of offset transactions; 39.8 percent of the licensed production transactions (by actual value) were directly related to the defense systems sold.

Industry Classification – Standard Industrial Classification Codes

Table 2-4 shows the offset transactions classified by major industrial sector for the thirteen year period, 1993-2005. Each industry sector is defined using the Standard Industrial Classification (SIC) system.¹⁶ Forty-four SIC categories are listed, which represent a wide cross section of the U.S. defense industrial base.

Of the various sectors, transportation equipment (SIC 37) accounted for more than half – 52.4 percent from 1993-2005 of the actual value of all offset transactions completed during the period. Transportation equipment made up 59.0 percent of the value of direct offset transactions, 47.7 percent of the value of indirect offset transactions, and 84.7 percent of the value of unspecified offset transactions. Transactions in this sector were composed mostly of aerospace products, including aircraft parts and components, engines and parts, hydraulic subsystems, and guided missiles and components.

Other major industry groups include electronic and electrical equipment (SIC 36) with 13.6 percent of the actual value of all transactions. SIC 36 includes products such as radar, communications equipment, and electronic components, as well as completed avionics equipment and material inputs for avionics such as circuit boards. Combined, transactions falling in SIC 37 and SIC 36 constitute 66 percent of the total value of offset transactions for the thirteen year period.

Technical services and consulting (SIC 87) made up 4.8 percent of the value of all transactions. Industrial Machinery (SIC 35) and Measuring and Analyzing Instruments (SIC 38) each accounted for 4.4 percent of the actual value of transactions. These three industry groups, along with transportation equipment and electronic/electrical equipment, comprised 79.6 percent of the total value of all transactions reported to date.

16. Standard Industrial Classification codes are used because conversion to NAICS has not been fully implemented.

Table 2-4. Offset Transactions by Major Industrial Sector and Offset Type, 1993-2005
(in \$ millions)

| 2-Digit SIC Code and Description | Unspecified | | | Unspecified | | | Unspecified | | |
|---|-------------|-----------|------------|-------------|--------|----------|-------------|--------|----------|
| | Total | Direct | Indirect | Total | Direct | Indirect | Total | Direct | Indirect |
| 7 Agriculture | \$53.6 | | \$53.6 | | | | 0.1% | | 0.2% |
| 9 Fishing, Hunting, and Preserves | \$7.9 | | \$7.9 | | | | 0.0% | | 0.0% |
| 10 Metal Mining | \$3.2 | | \$3.2 | | | | 0.0% | | 0.0% |
| 13 Crude Petroleum and Natural Gas | \$21.2 | | \$21.2 | | | | 0.1% | | 0.1% |
| 15 Building Construction | \$35.9 | \$20.8 | \$15.1 | | | | 0.1% | 0.1% | 0.1% |
| 16 Heavy Construction | \$1.5 | \$1.2 | \$0.3 | | | | 0.0% | 0.0% | 0.0% |
| 17 Construction and Special Trades | \$21.2 | \$1.0 | \$20.2 | | | | 0.1% | 0.0% | 0.1% |
| 20 Food and Kindred Products | \$15.5 | | \$15.5 | | | | 0.0% | | 0.1% |
| 22 Textile Mill Products | \$6.4 | | \$6.4 | | | | 0.0% | | 0.0% |
| 23 Apparel and Other Fin Products | \$3.8 | | \$3.8 | | | | 0.0% | | 0.0% |
| 24 Lumber and Wood Products | \$0.3 | | \$0.3 | | | | 0.0% | | 0.0% |
| 25 Furniture and Fixtures | \$0.3 | | \$0.3 | | | | 0.0% | | 0.0% |
| 26 Paper Mills and Allied Products | \$21.9 | \$0.9 | \$21.1 | | | | 0.1% | 0.0% | 0.1% |
| 27 Printing and Publishing | \$34.0 | \$23.9 | \$10.1 | | | | 0.1% | 0.2% | 0.0% |
| 28 Chemicals and Allied Products | \$442.9 | \$20.3 | \$422.7 | | | | 1.2% | 0.1% | 1.9% |
| 29 Petroleum Refining | \$3.2 | | \$3.2 | | | | 0.0% | | 0.0% |
| 30 Rubber and Miscellaneous Plastic Products | \$7.5 | \$0.7 | \$6.8 | | | | 0.0% | 0.0% | 0.0% |
| 32 Cut Stone and Stone Products | \$12.9 | | \$12.9 | | | | 0.0% | | 0.1% |
| 33 Primary Metal Industries | \$266.3 | \$9.4 | \$256.8 | | | | 0.7% | 0.1% | 1.2% |
| 34 Fabricated Metal Products | \$1,217.9 | \$739.5 | \$478.4 | | | | 3.3% | 5.0% | 2.2% |
| 35 Industrial Machinery, Exc Electricity | \$1,624.8 | \$157.0 | \$1,467.2 | | | | 4.4% | 1.1% | 6.6% |
| 36 Electronic and Electrical Equipment | \$5,073.4 | \$2,112.2 | \$2,957.0 | | | | 13.6% | 14.2% | 13.3% |
| 37 Transportation Equipment | \$19,547.1 | \$8,764.7 | \$10,574.6 | | | | 52.4% | 59.0% | 47.7% |
| 38 Measuring and Analyzing Interest | \$1,647.3 | \$799.2 | \$848.1 | | | | 4.4% | 5.4% | 3.8% |
| 39 Miscellaneous Manufacturing Industries | \$15.2 | \$0.6 | \$14.5 | | | | 0.0% | 0.0% | 0.1% |
| 42 Motor Freight and Warehousing | \$2.8 | | \$2.8 | | | | 0.0% | | 0.0% |
| 44 Water Transportation | \$60.6 | | \$60.6 | | | | 0.2% | | 0.3% |

Table 2-4. Offset Transactions by Major Industrial Sector and Offset Type, 1993-2005 (Continued)
(in \$ millions)

| 2-Digit SIC Code and Description | Total | Direct | Indirect | Unspecified Direct or Indirect | Total | Direct | Indirect | Unspecified Direct or Indirect |
|---|-------------------|-------------------|-------------------|--------------------------------------|---------------|---------------|---------------|--------------------------------------|
| 45 Transportation By Air | \$70.2 | \$54.7 | \$15.5 | | 0.2% | 0.4% | 0.1% | |
| 47 Transportation Services | \$3.5 | \$0.0 | \$3.4 | | 0.0% | 0.0% | 0.0% | |
| 48 Communications | \$217.3 | \$106.1 | \$111.2 | | 0.6% | 0.7% | 0.5% | |
| 49 Electric, Gas, and Sanitary Service | \$2.5 | | \$2.5 | | 0.0% | | 0.0% | |
| 61 Non-Depots Credit Interest | \$734.3 | \$10.2 | \$724.1 | | 2.0% | 0.1% | 3.3% | |
| 62 Security and Communication Brokers | \$131.2 | \$2.1 | \$129.1 | | 0.4% | 0.0% | 0.6% | |
| 67 Holding and Other Investment Offsets | \$666.9 | \$205.5 | \$437.8 | \$23.6 | 1.8% | 1.4% | 2.0% | 9.6% |
| 70 Hotels and Other Lodging | \$0.4 | | \$0.4 | | 0.0% | | 0.0% | |
| 73 Business Services | \$1,410.3 | \$324.0 | \$1,078.6 | \$7.7 | 3.8% | 2.2% | 4.9% | 3.1% |
| 76 Miscellaneous Repair Shops | \$8.5 | \$2.4 | \$6.1 | | 0.0% | 0.0% | 0.0% | |
| 80 Health Services | \$0.0 | | \$0.0 | | 0.0% | | 0.0% | |
| 81 Legal Services | \$0.1 | | \$0.1 | | 0.0% | | 0.0% | |
| 82 Educational Services | \$769.1 | \$285.6 | \$483.6 | | 2.1% | 1.9% | 2.2% | |
| 87 Technical Services and Cons | \$1,797.1 | \$569.6 | \$1,225.9 | \$1.7 | 4.8% | 3.8% | 5.5% | 0.7% |
| 89 Miscellaneous Services | \$124.7 | \$39.6 | \$85.1 | | 0.3% | 0.3% | 0.4% | |
| 96 Administration of Economic Programs | \$12.0 | | \$12.0 | | 0.0% | | 0.1% | |
| 99 Unclassifiable Establishments | \$1,183.1 | \$599.1 | \$583.9 | | 3.2% | 4.0% | 2.6% | |
| Total | \$37,279.7 | \$14,850.4 | \$22,183.9 | \$245.4 | 100.0% | 100.0% | 100.0% | 100.0% |

Source: BIS Offsets Database.

Note: In some cases, the amounts were too small to show in \$ millions

Countries and Regions

Table 2-5 shows various countries' offset requirements as a percentage of the underlying contract value, calculated from the data reported by U.S. prime contractors as well as the offset percentages required by each country's current official offset policy.

The first column, "Percent Offsets," is an average percentage derived from the BIS Offsets Database for the period covering 1993 to 2005, which is calculated by dividing the offset value by the export value. These thirteen-year average percentages tend to be lower than the official offset policy percentage. Offset demands have increased significantly over time, so the thirteen-year average percentage lags behind the actual current offset percentage required by the foreign government.

The second column, "Country Percent," reflects current offset percentages as required by the government of each individual country. Most countries set a single target percentage offset value; however, a few countries vary the percentage depending on the significance of the individual offset agreement to the local economy. Some countries have formulas which place more emphasis on indirect offset agreements rather than direct, thereby reflecting a country's desire to develop civilian industry rather than the defense sector of the economy. Other countries demand almost entirely direct offsets, reflecting the desire to maintain and enhance their defense sector. Therefore, offset percentages and type depend on the importance of each contract with respect to the economic direction of any given country government.

Regional offset percentages are greater in Europe and North and South America, with demands of 98.8 percent and 97 percent respectively, followed by the Middle East and Africa with 43.2 percent and Asia with 38.8 percent.

Defense Preparedness

The revenue generated by export sales, and the exports themselves, are important to U.S. defense prime contractors and to U.S. foreign policy and economic interests. Exports of major defense systems can help defray high overhead costs for the U.S. producer and help maintain production facilities and workforce expertise for current and future U.S. defense needs. The production capabilities and workforce are also available in case they are needed to respond to a national emergency. Exports also provide additional business to many U.S. subcontractors and lower-tier suppliers, promote interoperability of defense systems between the United States and allied countries, and contribute positively to U.S. international trade account balances. Prime contractors believe that they must make their systems more attractive in the sales competition by adding offsets. In fact, nearly all governments other than the United States require offsets as a condition of sale.

When an offset package requires a high proportion of subcontracting, co-production, licensed production, or purchases, it can negate many of the economic and industrial base benefits accrued through the export sale. U.S. defense subcontractors and suppliers, and in some cases portions of the prime contractor's business, are displaced by exports that include subcontract, co-production, or licensed production offsets. Purchases, which are indirect offsets, can displace sales from the commercial manufacturing sectors of the U.S. economy. Over 80 percent of offset transactions reported for the 1993-2005 period fell in the manufacturing sectors of the U.S. economy.

Table 2-5: Offset Percentages by Country and Groups 1993-2005

| Europe | | | Middle East and Africa | | |
|--------------------------------|------------------------|------------------------|-------------------------------|------------------------|------------------------|
| Country, Groups | Percent Offsets | Country Percent | Country | Percent Offsets | Country Percent |
| Austria | 174.2% | 200% | Egypt | N/R | Case-by-Case |
| Belgium | 80.1% | Case-by-Case | Israel | 48.6% | 50% |
| Czech Republic | W | 100% | Kuwait | 32.7% | 35% |
| EPG | 27.8% | N/A | Saudi Arabia | W | 35% |
| Denmark | 100.0% | 100% | South Africa | 116.0% | 30% |
| Finland | 100.0% | 100% | Turkey | 46.6% | Minimum 50% |
| France | 84.6% | 100% | United Arab Emirates | 57.1% | Minimum 60% |
| Germany | 100.0% | Up to 100% | | | |
| Greece | 113.4% | 80% to 300% | Region Total | 43.2% | |
| Hungary | W | | | | |
| Italy | 93.8% | Min. 70% | | | |
| Lithuania | W | 100% | | | |
| NATO | 55.8% | N/A | | | |
| The Netherlands | 118.6% | Up to 150% | | | |
| Norway | 104.8% | 100% | | | |
| Poland | W | 100% | | | |
| Portugal | 27.9% | 100% | | | |
| Romania | W | 80% | | | |
| Slovenia | W | 100% | | | |
| Spain | 88.5% | Up to 100% | | | |
| Sweden | 103.9% | 100% | | | |
| Switzerland | 78.9% | 100% | | | |
| United Kingdom | 83.9% | 100% | | | |
| Region Total | 98.8% | | Region Total | 38.8% | |
| North and South America | | | Asia | | |
| Country | Percent Offsets | Country Percent | Country | Percent Offsets | Country Percent |
| Brazil | W | 100% | Australia | 45.8% | 60% |
| Canada | 97.0% | 100% | Indonesia | N/R | 100% |
| Chile | W | 100% | Malaysia | 37.3% | 100% |
| | | | New Zealand | W | 30% |
| | | | Philippines | 100.0% | 80%-100% |
| | | | Singapore | W | Case-by-Case |
| | | | Republic of Korea | 60.3% | 30% |
| | | | Taiwan | 20.0% | 40% |
| | | | Thailand | 26.6% | 50% |
| Region Total | 97.0% | | | | |

Source: BIS Offsets Database and Country Policy Research.

N/A = Not Applicable

N/R = None Reported

W = Withheld to protect company-proprietary information

Previous studies and discussions indicate that U.S. prime contractors sometimes develop long-term supplier relationships with overseas subcontractors based on short-term offset requirements.¹⁷ These new relationships, combined with mandatory offset requirements and obligations, can endanger future business opportunities for U.S. subcontractors and suppliers, with possible negative consequences for the domestic industrial base. Other kinds of offsets can increase research and development spending and capital investment in foreign countries for defense or non-defense industries. They can also help create or enhance current and future competitors for U.S. subcontractors and suppliers, and in some cases prime contractors.

Employment

Given the variety of defense systems sold, the number of offset transactions carried out, and the limited data available, it is difficult to determine precisely the impact of offset agreements and transactions on employment in the U.S. defense sector. BIS has developed an estimate by using a five-year average of aerospace-related employment and value added data collected by the U.S. Department of Commerce's Bureau of the Census for the 2000-2004 period.¹⁸ Since sales of aerospace defense systems accounted for an average of 76.8 percent of the value of defense exports connected with offset agreements during 2000-2004, this method appears to provide a reliable estimate of the effect that all defense offset agreements have on employment (2004 data is the most recent available for comparison from the Bureau of the Census). This method takes into account work-years maintained because of the export sales as well as the work-years lost through certain kinds of offset transactions carried out in fulfillment of offset agreements.

U.S. prime contractors reported an average of \$5.1 billion in defense export contracts (agreements) with offset agreements for the 2001-2004 period. According to the Census Bureau's *Annual Survey of Manufacturers*, the average yearly value added per employee for the aerospace product and parts manufacturing industry during 2001-2004 was \$162,216. Dividing this figure into the 2001-2004 average yearly defense export contract value total results in an average annual total of 31,440 work-years that were maintained by defense exports associated with offset agreements during 2001-2004.¹⁹

For 2001-2004, the average annual defense export contracts of \$5.1 billion in had a related \$4.9 billion in offset commitments. It takes on average almost seven years of offset transactions to fulfill an offset agreement. In order to more accurately assess the impact of offset transactions on work-years, BIS compared the export contract value to the value of the prime contractor's offset obligation contractually committed at the time of the sale.

Subcontracting, purchasing, co-production, and licensing offset transactions are most likely to shift production and sales from U.S. suppliers to overseas firms. Other categories of offset transactions, technology transfer, training, overseas investment, and marketing, in the short or long run, can shift sales from U.S. suppliers as well. However, their impact is more difficult to calculate. Therefore, BIS bases its estimate of employment impacts only on subcontracting, purchasing, co-production, and licensing offset transactions.

17. See GAO report on offset activities, *Defense Trade: U.S. Contractors Employ Diverse Activities to Meet Offset Obligations*, December 1998 (GAO/NSIAD-99-35), pp. 4-5.

18. BIS's offset database uses SIC codes to define industries; in preparing its value added estimates, the Census Department uses the North American Industrial Classification System (NAICS). The SIC definition of the aerospace industry differs slightly from the NAICS definition, but the results are not significantly altered.

19. This calculation is based on the supposition that this value represents 100 percent U.S. content in all exports, which is not necessarily an accurate assumption.

These conservative calculations for employment impact are based on the assumption that the offset obligations entered into during 2001-2004 are made up of nearly the same proportion of offset transaction categories as past offset obligations. Those categories that can be most directly related to employment, subcontracting, purchasing, co-production, and licensing, accounted for an average of 82 percent of the total value of offset obligations during 2001-2004, or about \$1.5 billion. Applying the same value added figure used above \$162,216 leads to the loss of 9,047 work-years annually associated with the offset agreements entered into in 2001-2004.

Based on these calculations, it appears that 2001-2004 defense export sales averaging \$5.1 billion annually had a net positive effect on employment in the defense sector during the five-year period (an annual average of 22,393 work years). It should be noted that the 2001-2004 analysis does not include the potential impacts of an additional \$691 million annually of technology transfer, training, and overseas investment transactions.

Offset Agreements, 1993-2005

From 1993 to 2005, 42 prime contractors reported entering into 538 offset agreements valued at \$56.6 billion. The agreements were signed in connection with defense system exports totaling \$79.5 billion to 41 different countries. The value of the offset agreements represented 71.2 percent of the total value of the related export contracts during the entire thirteen-year period. The average term for completing the offset agreements with specific transactions was 81.5 months, or six years and eight months. Sales of aerospace defense systems (i.e., aircraft, engines, and missiles) made up 84 percent of all defense system export contracts, totaling \$66.8 billion.

The data for defense export contracts and related offset agreements (including offset percentages) are presented in Chart 4-1. The value of the offset agreements as a percentage of the value of defense export contracts increased an average of 2.5 percentage points per year over the thirteen-year reporting period. In 2003, offset agreements as a percentage of export contracts (by value) reached the highest point during the thirteen-year period: 124.9 percent;²² this ratio declined to 87.9 percent in 2004 and to 64.8 percent in 2005. The lowest percentage was recorded in 1993 at 34.3 percent of the value.²³

Concentration of Offset Activity

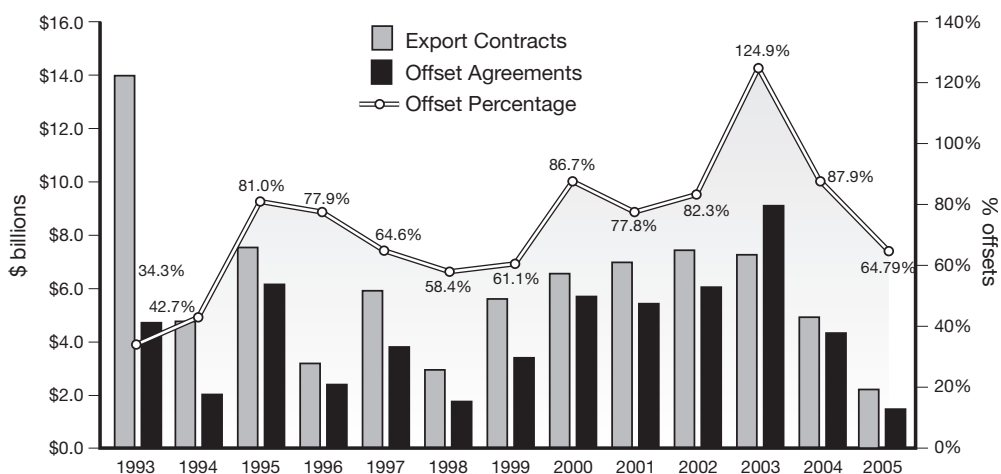
The data reported by U.S. firms confirm that agreements involving a small number of companies, countries, and defense systems dominated offset agreements between 1993 and 2005. The top five U.S. exporters (of 42 companies reporting data on offsets over the thirteen-year period, 8 of which reported offsets in 2005) accounted for 80.2 percent of the value of defense export contracts and 82.2 percent of the value of offset agreements. This market concentration reflects industry consolidation, the high costs of developing and manufacturing defense systems, and the small number of firms that have the financial and productive resources to produce and export them. Each prime contractor coordinated the activities of hundreds, if not thousands, of subcontractors and suppliers that contributed to the systems' production, as well as the work of thousands of employees.

Similarly, offsets and related defense system exports appear to be concentrated among a few purchaser governments or groups. Table 4-1 lists the top 25 governments or groups and their total export contract and offset agreement values for 1993-2005.

22. One large defense system export in 2003 with an offset percentage of more than 170 percent skewed the data for that year. Without this export and its related offset agreement, the average offset percentage for 2003 would fall to 81.3 percent (from 124.9 percent with the sale). This export also affected the average offset percentage for the entire period. With this sale and offset, the average offset percentage for 1993-2005 is 71.2 percent; without it, the percentage is 66.5 percent.

23. Much like the outlier from 2003 (above footnote), a similar occurrence took place in 1993 when two large exports with low offset percentages skewed the average offset percentage downward.

Chart 4-1. Export Contracts and Offset Agreements 1993-2005



Source: BIS Offsets Database

**Table 4-1. Top 25 Governments by Export Contracts
(Total, 1993-2005)**

| Country or Groups | Number of Agreements | Export Contracts | Offset Agreements |
|--------------------------|----------------------|-------------------------|-------------------------|
| 1. United Kingdom | 43 | \$12,123,201,286 | \$10,166,492,643 |
| 2. Taiwan | 39 | \$10,844,770,700 | \$2,171,542,030 |
| 3. Republic of Korea | 59 | \$8,669,008,808 | \$5,231,339,429 |
| 4. Greece | 49 | \$6,309,342,343 | \$7,155,872,271 |
| 5. Canada | 27 | \$4,621,362,694 | \$4,482,332,872 |
| 6. Israel | 47 | \$4,250,630,606 | \$2,065,076,626 |
| 7. Saudi Arabia | Withheld | \$4,091,600,000 | \$1,427,400,000 |
| 8. Poland | Withheld | \$3,716,100,000 | \$6,244,100,000 |
| 9. Australia | 17 | \$3,499,462,000 | \$1,603,885,000 |
| 10. Turkey | 18 | \$2,695,043,000 | \$1,255,350,000 |
| 11. Italy | 9 | \$2,680,257,000 | \$2,515,257,000 |
| 12. Switzerland | 10 | \$2,556,712,040 | \$2,016,712,040 |
| 13. The Netherlands | 44 | \$2,006,645,677 | \$2,379,205,667 |
| 14. Spain | 25 | \$1,848,492,588 | \$1,636,313,004 |
| 15. Norway | 28 | \$1,237,901,824 | \$1,296,801,824 |
| 16. NATO | Withheld | \$989,749,000 | \$552,000,000 |
| 17. Kuwait | 11 | \$871,353,822 | \$284,537,066 |
| 18. Denmark | 33 | \$800,319,000 | \$800,329,000 |
| 19. France | 4 | \$785,200,000 | \$664,200,000 |
| 20. Malaysia | 4 | \$759,100,000 | \$283,500,000 |
| 21. Thailand | 6 | \$539,729,463 | \$143,696,539 |
| 22. EPG | Withheld | \$539,500,000 | \$150,200,000 |
| 23. United Arab Emirates | 7 | \$539,300,000 | \$308,200,000 |
| 24. Portugal | 3 | \$442,061,000 | \$123,393,000 |
| 25. Czech Republic | Withheld | \$312,600,000 | \$62,500,000 |
| Total | 492 | \$77,729,442,851 | \$55,020,236,011 |
| All Countries | 538 | \$79,468,479,073 | \$56,582,622,244 |

Source: BIS Offsets Database.

According to data provided by U.S. prime contractors, five out of the top six defense systems exported were aircraft systems. The five aircraft system exports accounted for 40.1 percent of the value of all export contracts and 43.0 percent of the offset agreements during the reporting period. Nine of the top 10 defense systems were aerospace-related; the top 10 accounted for 55.5 percent of the export contracts and 57.5 percent of the offset agreements during the thirteen-year period.

Regional Distributions

Chart 4-2. Regional Totals of Export Contracts and Offset Agreements 1993-2005 in \$ Billions

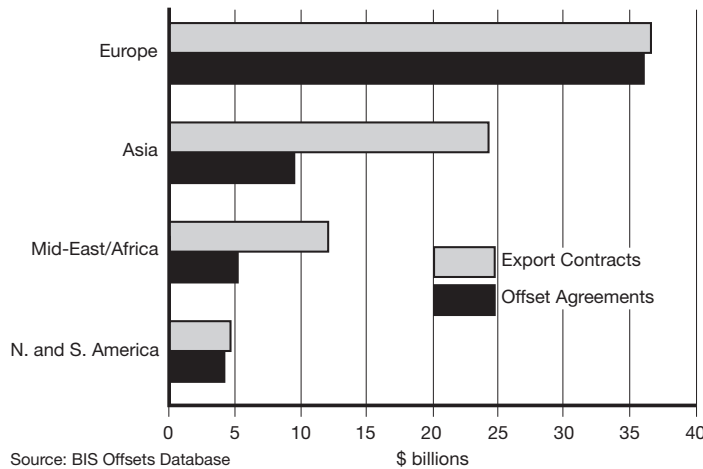


Chart 4-2 shows offset agreements and export contracts by region for 1993-2005. European countries accounted for the majority of offset activity and defense system exports, reporting 46.9 percent of the value of U.S. defense export contracts and 65.0 percent of the value of offset agreements. Asian countries ranked second in both categories, with 31.5 percent of related U.S. export contract values and 17.4 percent of the value of offset agreements.

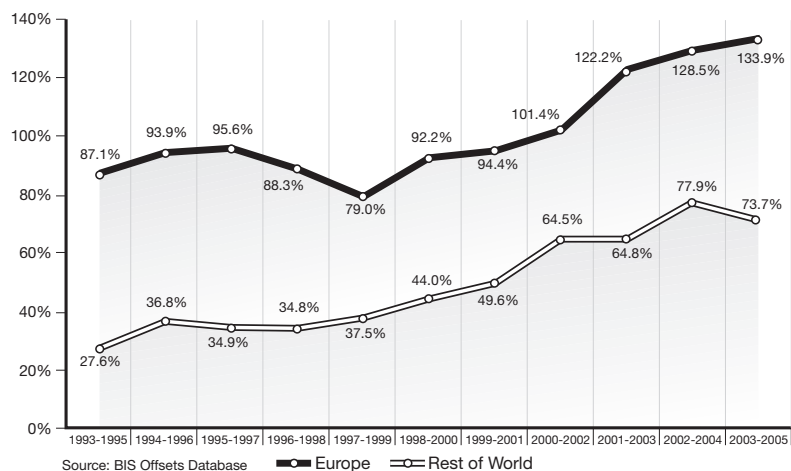
In 1999, 2000, 2003 and 2005, contracts and agreements with the Middle East and Africa increased significantly from the preceding years. In 2003 and again in 2005, the Middle East and Africa share of annual offset defense systems sales and associated agreements exceeded those of Asia.

Participating countries in the Western Hemisphere have consistently played the smallest role, signing only 30 contracts in the thirteen-year reporting period. In summary, exports of defense systems to North and South America made up 5.9 percent of all defense system exports, at a value of \$4.7 billion, and included 8.1 percent of the total offset agreements, at a value of \$4.6 billion, between 1993 and 2005.

Are Offset Demands Increasing?

The data show not only that offset demands are increasing over time, but also that more countries outside Europe are demanding higher offset percentages. Chart 4-3 shows that, although historically lower than European demands, offset requirements outside Europe are on an upward trend. Almost 77 percent of the non-European offset agreements valued at 100 percent or more of the export contract value has occurred since 1998, of these 33 agreements with offset requirements of 100 percent or more, 10 were with Canada and another four were with

Chart 4-3: Percent Offsets for Europe vs. Rest of the World: Weighted Moving Average, 1993-2005.



Australia. Moreover, in the last three years, countries entering into offset agreements with U.S. firms for the first time have demanded offsets worth 100 percent or more of contract value, emulating their European counterparts.

In the last decade, shrinking worldwide defense expenditures and the overcrowding in the defense supplier sector have forced defense industries in many nations to consolidate. As sales opportunities narrowed, competition for such sales and related offsets became more intense. Higher-than-normal overhead related to low levels of capacity utilization in defense industries coupled with competitive pressures on prices also have squeezed corporate profits.

At the same time, foreign purchasing governments are under pressure to sustain their indigenous defense companies or to create new ones, defense and commercial, and accordingly, are demanding more offsets. Significant, but decreasing, public outlays for foreign-made defense systems become even more controversial, leading to higher offset demands to deflect political pressure and increase domestic economic development. In a growing number of cases, foreign governments' defense purchases are being driven by the competitiveness of the offset package offered by U.S. industry rather than the quality and price of the defense system purchased.

Executive Summary Interagency Team

In December 2003, President Bush signed into law a reauthorization of, and amendments to, the *Defense Production Act of 1950* (DPA). Section 7 (c) of P.L. 108-195 amended Section 123 (c) of the DPA, which required the President to designate a chairman of an interagency team to consult with foreign nations on limiting the adverse effects of offsets in defense procurement without damaging the economy, defense industrial base, defense production, or defense preparedness of the United States. The statute further provided that the team be comprised of the Secretaries of Commerce, Defense, Labor, and State, and the U.S. Trade Representative. P.L. 108-195 requires the interagency team to meet quarterly, and to send to Congress an annual report describing the results of the consultations and meetings. On August 6, 2004, President Bush formally established the interagency team chaired by the Secretary of Defense. Within the Department of Defense, chairmanship was delegated to the Under Secretary of Defense for Acquisition Technology and Logistics. The interagency team subsequently established a working group to conduct the background research and prepare for the consultations, execute the consultations, analyze the results, and write the annual and final reports, all with oversight and approval by the interagency team.

Domestic Consultations

In preparation for the foreign consultations, the interagency team and working group identified and consulted with domestic entities affected by offsets:

- U.S. defense prime contractors
- Subcontractors (or first-tier suppliers or small and medium enterprises) to the prime contractors
- Labor representatives and industry advisors from the U.S. Trade Representative (USTR)
- Department of Commerce (DoC) administered Industry Trade Advisory Committees (ITACs)

The consultations were designed to allow the various domestic entities to inform the interagency team of their views regarding offsets in defense trade and to make suggestions on what specific issues

should be raised when consulting with U.S. trading partners. The organizations that participated in the domestic consultations are shown in Table ES-1.

| Table ES-1. Domestic Entities Consulted | |
|--|---|
| Category | Entity |
| U.S. defense prime contractors | Aerospace Industries Association American Shipbuilding Association Defense Industry Offset Association National Defense Industrial Association |
| U.S. defense subcontractors | U.S. Business and Industrial Council |
| U.S. labor organizations | American Federation of Labor and Congress of Industrial Organizations International Association of Machinists and Aerospace Workers International Union, United Automobile, Aerospace Agricultural Implement Workers of America |
| DOC/USTR-ITACs* | Industry Trade Advisory Committee–1, Aerospace Equipment Industry Trade Advisory Committee–4, Consumer Goods Industry Trade Advisory Committee–6, Energy and Energy Services |
| *ITACs included representatives from defense prime and subcontractors. | |

Consultations with Foreign Nations

During domestic consultations, the domestic entities were also asked to recommend foreign entities for consultation. Based on those recommendations and its own deliberations, the interagency team selected the following countries for consultation:

| | |
|---------|-------------------|
| Canada | Netherlands |
| Denmark | Republic of Korea |
| France | Spain |
| Germany | Sweden |
| India | United Kingdom |
| Italy | |

These countries were selected primarily because their governments require high levels of offsets or industrial compensation when purchasing defense systems and services from U.S. defense contractors. Department of Commerce data for 1993–2004 show that these countries, with the exception of India, which is new to offsets, account for approximately 50 percent of all offset agreements (by value). Eight of the eleven countries are in Europe. Europe accounts for slightly more than 65 percent of all offset agreements (by value). The nations consulted were divided into four categories, as Table ES-2 shows.

| Table ES-2. Categories of Nations Consulted | | |
|--|--------------------------|--|
| Category | Number of Nations | Demanders or Providers of Offsets |
| 1. Nations that execute offsets without a national policy, that is, on a customary basis | 2 | Demanders and providers |
| 2. Nations that execute offsets under transparent, flexible and transnational oriented policies | 1 | Demander and provider |
| | 3 | Primarily demanders |
| 3. Nations that execute offsets based on less flexible and more nationalistic-oriented policies | 4 | Primarily demanders |
| 4. Nations that execute offsets under national statute which results in an inflexible and nationalistic offsets policy | 1 | Primarily a demander |

Interagency Team Findings

The interagency team and working group analyzed all the statements made by domestic and foreign entities during consultations and other information collected during two years of consultations. From these consultations, it was clear that the United States is not alone in its concerns about the use of offsets in defense trade. Other nations, which also are major providers of offsets, expressed concerns about the adverse effects of offsets on their sales of defense weapons systems. These provider nations expressed interest in a multinational dialogue to address their concerns. From both providers and demanders of offsets, most nations agree with the United States' view that there is a real cost to offsets. The following describes these key findings in more detail.

General Offset Findings

- Most nations purchasing defense systems demand offsets.
- Offsets are persistent and increasing.
- Offsets in their many forms may never be completely eliminated.
- Most national offset policies are executive branch policies, usually not found in law. They range from the explicit to the customary. The ministries of defense in the consulted countries are concerned that offsets unduly increase the purchase price of weapons systems.
- Many nations believe that the United States has a de facto offsets policy; most foreign systems that it purchases are produced in the United States. Many nations note that offsets are necessary to mitigate U.S. domestic preferences.
- Some countries believe that the United States is enforcing its export control regime in a protectionist manner.
- U.S. domestic entities' perceptions on offsets are both positive and negative, depending on whether work is gained or lost as a result of a successful defense sale and its associated offset.

Adverse Offset Effects

- Direct offsets reduce the near-term benefits of the sale by reducing the amount of domestic work supported in the United States
- Offsets are not free; estimates indicate that they increase the price of defense equipment by as much as 15 to 30 percent
- Certain types of offsets distort the ability of the provider to fulfill the offset requirement in accordance with best business practices:
 - Those demanded solely for political reasons
 - Those that attempt to turn offsets into a type of foreign aid or economic assistance program
- Defense-related indirect offsets may create business incentives for prime contractors to place future defense work in foreign countries that would otherwise be performed by U.S. domestic subcontractors.
- Certain offset provisions are perceived to be particularly adverse by U.S. industry, including the following:
 - Short timeframes to meet offset milestones
 - Excessive, non-liquidating penalties (as an incentive to meet milestones)
 - Required bank guarantees to pay penalties
 - Restrictions on the use of multipliers
 - Directed subcontracts
- Offsets can decrease competition and innovation when prime contractors are directed to use specific foreign subcontractors without regard for their competitiveness and best value.

Other Offset Effects

There are other effects of offsets, which demonstrate why the United States government should not unilaterally preclude offsets:

- U.S. prime contractors view offsets as a necessary part of doing business and, accordingly, execute offsets as a profit-making enterprise.
- Offsets are perceived by the U.S. aerospace industry and others as giving U.S. defense prime contractors a competitive advantage in opening foreign defense markets and winning foreign competitions.
- Industry stated that those offsets that allow U.S. prime contractors and foreign subcontractors to team based on competition and best value may increase global defense industry competition by encouraging prime and subcontractors to be innovative and responsive to customer needs.

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- Industry also stated that requirements to fulfill offsets can lead prime contractors to discover innovative, reliable, and cost-effective foreign subcontractors that they would not have found on their own.
 - Industry stated that offsets are usually necessary to make a defense sale, which may provide benefits, including the following:
 - Defense sales often keep U.S. production lines open for defense systems not being procured or procured in uneconomic volumes by the Department of Defense.
 - Defense sales introduce economies of scale, which often reduce weapon system unit costs for all purchasers over the long term.
 - Defense sales often support additional work, at both prime and subcontractors, for exports of portions of the defense system that are not subject to mandatory offsets.
 - Defense sales promote interoperability with U.S. and coalition partner forces for weapon systems using common parts, components, and support systems.
 - To the extent that offsets make it politically feasible for foreign governments to spend money on defense purchases, offsets help:
 - Maintain defense funding for our allies and partners
 - Increase net sales to U.S. industry and exports for the United States
 - Provide military capability and promote interoperability

Interagency Team Offset Recommendations

Based on its findings and collective judgment, the interagency team recommends that:

- The United States should continue to consult and dialogue with nations and international organizations involved with offsets. The goal of these consultations and dialogues should remain the same, utilizing the existing Department of Defense-led interagency approach. The consultations and dialogues should include all potentially affected national ministries and departments, and always include the ministries or departments of defense.
- Nations demanding offsets should be encouraged to give contractors maximum flexibility in fulfilling offset requirements so they can make sound business decisions.
- More international cooperative projects should be encouraged because they do not require offsets among the partnering nations. Participation of national contractors should be based on competition and best value.

Limiting Adverse Effects of Offsets

The interagency team also proposes the following strategies for limiting the adverse effects of offsets, while recognizing that the United States must be cautious about taking any action that could possibly damage its economy, defense industrial base, defense production, or defense preparedness.

- The United States should encourage and promote multilateral dialogue with and within selected defense and trade forums and organizations for the following purposes:

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- Promote global understanding of how the different types and the adverse effects of offsets, including indirect defense and non-defense related offsets, affect the defense industrial base and market place.
 - Develop a global, uniform defense offset policy, with model offset agreements, to guide the execution of defense offsets.
 - The United States should encourage and promote bilateral and multilateral dialogue with other major offset-providing nations to include the affected national ministries or departments of defense and then with major offset-demanding nations to:
 - Harmonize approaches and limit the adverse effects of offsets
 - Give contractors maximum flexibility in fulfilling offset requirements using sound business practices
 - The United States should develop a national strategy for encouraging and promoting more international cooperative projects because they eliminate the need for participants to invoke offsets. Participation of partnering nations should be based upon equitability of benefits, while participation of contractors from partnering nations should be based on competition and best value.